

RESPONSE UNDER 37 C.F.R. §1.116
USSN 09/328,893

“[w]hen not defined by applicant in the specification, the words of a claim must be given their plain meaning. In other words, they must be read as they would be interpreted by those of ordinary skill in the art” (emphasis added). Further, “[W]ords in patent claims are given their ordinary meaning in the usage of the field of the invention ...” (emphasis added).

In addition, pursuant to MPEP § 2173.05(a), “[t]he meaning of every term used in a claim should be apparent from the prior art *or* from the specification and drawings at the time the application is filed (emphasis added).”

Here, the meaning of the term “managed object” is clear from the prior art. For example, page 1, second paragraph, of the specification of the present application refers to the article “Management von SDH-Netzelementen: eine Anwendung der Informationsmodellierung”, which describes a method and hardware for managing network elements in digital communications systems using managed objects (this article was submitted to the USPTO with the Information Disclosure Statement filed on June 9, 1999).

As disclosed on page 331, second and third columns, of that article “[a]ccording to the OSI System Management model a system is composed of a set of resources that exist to provide services to a user. These resources may exist independently of their need to be managed. System management defines the management view of a resource as a managed object (MO) which represents the resource, for the purpose of management, at the interface of the system. The managed object acts as the recipient for the management operations issued by the manager and is responsible for sending reports related to spontaneous events that happen in the system. All relevant data is thus encapsulated with MOs and can only be referenced or changed by the defined methods of the MOs.”

RESPONSE UNDER 37 C.F.R. §1.116
USSN 09/328,893

Further, page 332, first and second columns, state that managed objects have properties such as “Attribute”, “Notification”, “Action”, “Behaviour”, and “Name Binding”.

As another prior art example, Applicants note US Patent No. 6,499,059, which is directed to a method of controlling a network element. Therein, “network elements” include crossconnects, add/drop multiplexers, and line multiplexers.¹

The ‘059 patent clarifies that “[f]unctions of the network elements are described and implemented in the form of managed objects (MO)” (emphasis added).² As further clarified, “[m]anaged objects are images of physical or virtual components of the network element which describe the static and dynamic properties of the respective component. A managed object is an instance of a managed-object class. Such a managed-object class is defined by its attributes, the operations that can be performed by its objects, the notifications that can be emitted by its objects, and its related behavior. Each managed object has an unambiguous, distinguished name. From a management point of view, a managed object exists if it has a distinguished name and supports the operations and notifications defined for its class. The entirety of the managed objects existing in a network element, together with their attributes, is referred to as the Managed Information Base (MIB), and reflects the current configuration of the network element (emphasis added).³

¹ See US Patent No. 6,499,059; col. 1, ln. 19-20

² See US Patent No. 6,499,059; col. 1, ln. 29-31

³ See US Patent No. 6,449,059; col. 2, ln. 45-59

RESPONSE UNDER 37 C.F.R. §1.116
USSN 09/328,893

For example, managed objects of the network element “crossconnect” are objects for switched connections, for termination points of the switching matrix of the crossconnect, for physical assemblies and boards, and for result files of regular performance monitoring operations in the network element (emphasis added).⁴

In addition, Applicants enclose CCITT Recommendation X.720, issued by the International Telecommunication Union, as further evidence that the term “managed object” is a term of art used in the art of network management (see, e.g., pages 1 and 5 of CCITT Recommendation X.720). For example, page 5 of the CCITT document states that “[m]anaged objects are abstractions of data processing and data communications resources (e.g. protocol state machines, connections, and modems) for the purposes of management.”

Finally, Applicants submit a definition of the term “managed object” found on the web site of the Institute for Telecommunication Sciences (which is the research and engineering branch of the National Telecommunications and Information Administration), which defines a “managed object”, in the context of a network, as “an abstract representation of network resources that are managed.” As noted there “[a] managed object may represent a physical entity, a network service, or an abstraction of a resource that exists independently of its use in management.”

Referring to the application text and the claims in the present application, MPEP §§ 2111.01 and 2173.05(a), cited above, mandate that the term “managed object” must be read as it would be interpreted by those of ordinary skill in the art, and is given its ordinary

⁴ See US Patent No. 6,499,059; col. 3, ln. 37-44

RESPONSE UNDER 37 C.F.R. §1.116
USSN 09/328,893

meaning in the usage of the field of the invention (i.e., network management). Clearly, given the extensive factual evidence above regarding the meaning of the term “managed object”, a person skilled in the art of managing network elements recognizes the term “managed object” as a term of art. More specifically, a person skilled in the art of managing network elements understands that “managed objects” are images of physical or virtual components of a network element which describe the static and dynamic properties of the respective component.

No swapping of such “managed objects” is taught or suggested in the Bennett and Mishra references. Instead, the Bennett reference deals with swapping code objects, i.e., parts of application software, executable on a single computer 100. Through the swapping of the code objects, the resources of the computer memory 102 are managed (see Fig. 1B), so that an application program can run more smoothly on the computer 100. Swapping different parts of application software into and out of a memory of a computer, however, has nothing to do with swapping managed objects (as defined in the prior art and as understood by a person skilled in the art) in order to manage network elements, such as cross-connects, add/drop multiplexers, or line multiplexers.

The Mishra reference does not teach or suggest this concept either. Rather, the Mishra reference merely teaches an SDH network 91 that connects various nodes, such as nodes 1, 2, 3, 4; second level nodes 211 to 214; 321-324; 411-415, and 431-434, etc.⁵ These nodes are add-drop multiplexers and cross-connects, which have associated multiplexers.⁶ However, just like

⁵ See Mishra reference, col. 5, ln. 52, to col. 6, ln. 6

⁶ See Mishra reference, col. 6, ln. 7-13

RESPONSE UNDER 37 C.F.R. §1.116
USSN 09/328,893

in the Bennett reference, there is no teaching or suggesting in the Mishra reference that managed objects as defined in the prior art and as understood by a person skilled in the art are swapped into and out of a memory in the manner claimed in claim 1.

Since neither Bennett nor Mishra teaches or suggests the swapping of managed objects as defined in the prior art and as understood by a person skilled in the art in the manner claimed in claim 1, independent claim 1 is patentable over the prior art made of record.

Independent claims 7 and 9 recite “managed objects” that are swapped into and out of a memory in the specific manner claimed in the respective claims. Therefore, patentability arguments analogous to those presented in connection with the patentability of claim 1 apply to independent claims 7 and 9 with equal force.

The dependent claims are patentable at least by virtue of dependency from their respective independent claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 C.F.R. §1.116
USSN 09/328,893

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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PATENT TRADEMARK OFFICE
GFL/AXP/plr
Date: July 1, 2003

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